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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,378	10/15/2003	Dong Kwan Ma		6312

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EXAMINER

BUTLER, DOUGLAS C

ART UNIT PAPER NUMBER

3683

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,378

Applicant(s)

MA ET AL.

Examiner

Douglas C. Butler

Art Unit

3683

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 10-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-16 ^{remain} ~~are~~ subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. An action on the merits of claims 1-9 indicated as readable on the elected Species B (Figs. 3-6) is included in this office action. The election is without traverse since no arguments are set forth. The examiner acknowledges that applicants have the right to prosecute the other embodiments in later-filed divisional applications.

2. Claims 10-16 are withdrawn under 37 CFR 1.142 (b).

3. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are no clear antecedent bases for "the external surface of the spindle" of claim 1, lines 4-5 and "the lower end of the spindle" of claim 1, lines 5-6.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeon et al (US 2002/0109052 A1) in view of any one of the secondary references to Obara et al (717) or Kincel (916) or Vivian (431) or Goodrich, Jr. et al (057).

The principal reference to Jeon et al (052 A1) discloses the invention substantially as claimed except for the feature that the guide sleeve is fixedly connected to the spindle by adhesive or glue.

In Jeon et al, the guide sleeve 6 is fixed to the spindle 2 by the method or process similar to that described in the instant specification on page 3, paragraph 7 by the use of a screw or deforming or striking the surface of the guide sleeve (see Fig. 1 of Jeon et al) to mechanically affix the guide sleeve to the spindle as per Jeon et al at column 2, paragraph 31.

Each one of the secondary references discloses glueing a bushing or sleeve to an associated structure. See column 3, lines 3-6 of Obara et al (717), the last two lines of the Abstract, column 2, lines 45-50 of Kincel (916), column 2, lines 27-35 of Vivian (431) and column 2, lines 48-52 of Goodrich, Jr. et al (057).

It would have been obvious at the time the invention was made to one having ordinary skill in the art to which the invention pertains to modify the principal reference to Jeon et al to glue the guide sleeve 6 to the spindle rather than to mechanically fix the elements together as taught by each of the secondary references.

Such modification involves replacing using one well known type of method of connection with an equivalent. The assemblies operate in substantially the same manner with substantially the same effect regardless of the type of connecting method

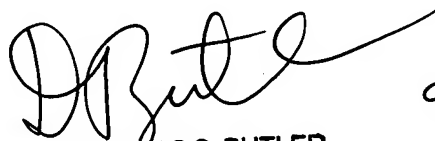
Art Unit: 3641

used. By using adhesive or glue, cost savings may result by avoiding metal-working steps. Re claim 9, the amount of adhesive, i.e., thickness would have been within the skill of an artisan in the art absent statements in the original disclosure establishing criticality.

8. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jeon et al as modified by the prior art in paragraph 7 above further in view of Hosan et al (5131615).

It would have been obvious to one having ordinary skill in the art to make one of the bushings or sleeves of Fig. 1 of Jeon et al, as modified, out of nylon as taught by Hosan et al at column 2, lines 60-64 in that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416. The particular thickness of the nylon layer would have been within the level of ordinary skill in the art. The instant specification does not attribute any criticality to the indicated thickness.

9. Any inquiry concerning this communication should be directed to Exmr. Butler at telephone number (703) 308-2575.


DOUGLAS C. BUTLER
PRIMARY EXAMINER
AU3683

9/4/2004

Butler/vs
September 1, 2004